

EQ: How do you use a scatterplot to predict possible outcomes of a situation?

A scatterplot is a collection of _____ on a graph. The plot will show the relationship between two _____.

There are three kinds of correlation: _____, _____, and _____.

A positive correlation will show a positive _____ among the points; negative correlation shows a negative _____; no correlation shows that there is no relationship between the two variables.

Where there is a positive or negative correlation, we can draw in a _____
_____. This line comes close to as many points as possible. The line may or may not actually _____ the given data points.

To find the equation of the line of best fit, pick _____ ON THE LINE
and use the point slope form:

Example 1: Draw examples of graphs that have:

- a. Positive correlation b. Negative correlation c. No correlation

Example 2: Determine whether there will be a positive, negative, or no correlation of the following pairs of data. Why do you think so?

- a. Cars' horsepower and the number of miles per gallon of gas they get.

b. Number of miles within the United States that a letter is sent with the U.S. Postal Service and the cost of postage.

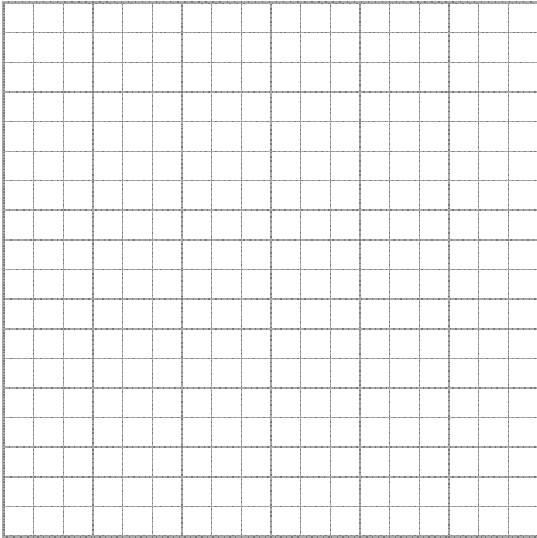
c. The weight of a person and the hours of exercise they do per week.

Example 3: Use the table below, which shows the advertised price of a car and its age at the end of 2004.

Age	2	4	5	6	7	8	9	11	11	16
Price	13000	11500	8500	8100	7200	4900	4900	2300	3000	800

a. Which variable would be the independent variable? Which would be dependent?

b. Make a scatterplot of the data.



c. What type of correlation does this graph show? Why do you think so?

d. Draw in a line of best fit and find the equation.